SANTA CRUZ BIOTECHNOLOGY, INC.

Cytokeratin 20 (H-70): sc-25725

The Power to Question

BACKGROUND

Cytokeratins comprise a diverse group of intermediate filament proteins (IFPs) that are expressed as pairs in both keratinized and non-keratinized epithelial tissue, where they constitute up to 85% of mature keratinocytes in the vertebrate epidermis. Cytokeratins play a critical role in differentiation and tissue specialization and function to maintain the overall structural integrity of epithelial cells. The α-helical coiled-coil dimers associate laterally end-to-end to form 10 nm diameter filaments. Cytokeratins are useful markers of tissue differentiation, and in addition, they aid in the characterization of malignant tumors. Cytokeratin 20 is abundantly expressed in goblet cells and enterocytes of the gastrointestinal tract, and Cytokeratin 20 is a useful marker of pancreatic and colorectal cancer. Cytokeratin 20 is also helpful in distinguishing different types of highly related carcinomas, such as renal oncocytomas from renal cell carcinomas.

REFERENCES

1. Moll, R., et al. 1993. The human gene encoding cytokeratin 20 and its expression during fetal development and in gastrointestinal carcinomas. Differentiation 53: 75-93.
2. van der Velden, L.A., et al. 1993. Cytokeratin expression in normal and (pre)malignant head and neck epithelia: an overview. Head Neck 15: 133-146.
3. Marceau, N., et al. 1995. Cytokeratin expression, fibrillar organization and subtle function in liver cells. Biochem. Cell Biol. 73: 619-625.
4. Fuchs, E. 1995. Keratins and the skin. Annu. Rev. Cell Dev. Biol. 11: 123-153.
5. Quillien, V., et al. 1995. Serum and tissue distribution of a fragment of cytokeratin 19 (cyfra 21-1) in lung cancer patients. Anticancer Res. 15: 2857-2863.
6. Wildi, S., et al. 1999. Characterization of cytokeratin 20 expression in pancreatic and colorectal cancer. Clin. Cancer Res. 5: 2840-2847.

CHROMOSOMAL LOCATION

Genetic locus: KRT20 (human) mapping to 17q21.2; Krt20 (mouse) mapping to 11 D.

SOURCE

Cytokeratin 20 (H-70) is a rabbit polyclonal antibody raised against amino acids 1-70 of Cytokeratin 20 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

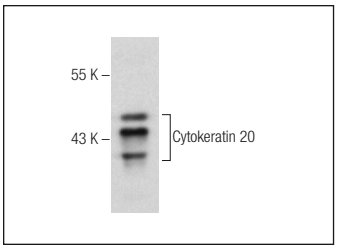
APPLICATIONS

Cytokeratin 20 (H-70) is recommended for detection of Cytokeratin 20 of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

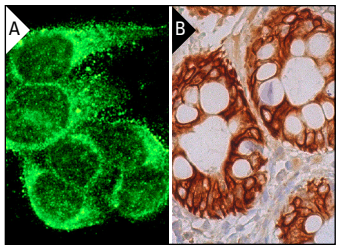
Suitable for use as control antibody for Cytokeratin 20 siRNA (h): sc-43313, Cytokeratin 20 siRNA (m): sc-43314, Cytokeratin 20 shRNA Plasmid (h): sc-43313-SH, Cytokeratin 20 shRNA Plasmid (m): sc-43314-SH, Cytokeratin 20 shRNA (h) Lentiviral Particles: sc-43313-V and Cytokeratin 20 shRNA (m) Lentiviral Particles: sc-43314-V.

Molecular Weight of Cytokeratin 20: 46 kDa.

DATA



Cytokeratin 20 (H-70): sc-25725. Western blot analysis of Cytokeratin 20 expression human colon tissue extract.



Cytokeratin 20 (H-70): sc-25725. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoskeletal localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing cytoplasmic and membrane staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Wang, J.G., et al. 2010. Primary pleomorphic liposarcoma of pericardium. Interact. Cardiovasc. Thorac. Surg. 11: 325-327.
2. Zhao, J., et al. 2014. Evaluation of ultrasound-processed rapid cell blocks in the cytopathologic diagnosis of cavity fluids. Acta Cytol. 58: 182-191.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.